Printed Reports Deployment Strategy

**For Project: Data Access and Dissemination System,
American FactFinder (AFF)**

Version No: 000.02

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Date printed: 1/20/2006

Page 1 of 15

Printed Report Deployment Strategy History

Document Location

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The source of the document is located in the project's documentation repository in directory:
I:\$AFF\AFF Printed Reports\$Printed Rpts Generic\00 Stds &Proc\Printed Reports Deployment Strategy v00.2.doc

Revision History

Revision Number	Revision Date	Summary of Changes	Authors
000.01	03/26/03	First issue	Peggy Lynch Sorin Nastea
000.02	05/16/03	First issue with added comments	Peggy Lynch Sorin Nastea

Approvals
This document requires the following approvals:

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RESTRICTION ON DISCLOSURE AND USE OF DATA

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Date printed: 1/20/2006

Page 2 of 15

TABLE OF CONTENTS

This copy is printed from C:\Documents and Settings\davis090\Desktop\Bidders Library\For CD-ROM Bidder's Library
13jan06\Printed Reports\Draft Printed Reports Deployment Strategy v00.2.doc
Date printed: 1/20/2006

Page 3 of 15

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Date printed: 1/20/2006

Page 4 of 15

1. INTRODUCTION

1.1. Identification

This document is identified as the American FactFinder (AFF) Printed Report Deployment Strategy. The production and maintenance of this document is the responsibility of the American FactFinder (AFF) Project Manager.   Approval of this document is the responsibility of the persons listed in the Approvals table on page 2.

1.2. Scope

This document outlines the printed report deployment tasks, activities, dates and responsible parties required for the deployment of the <product> printed report product to a pdf format for supplier review and approval using American FactFinder (AFF) on the development environment.

1.3. Purpose

The purpose of this document is to provide the definition of the printed report deployment process at a high level. The audience includes the entire AFF printed Report Deployment team.

1.4. Document Organization

This document is organized into the following sections and appendices:

1. Section 1 defines the purpose of the document.

2. Section 2 lists the parent, applicable, and reference documents.

3. Section 3 defines the printed report deployment process.

4. Section 4 defines the printed report activities management.

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Date printed: 1/20/2006

Page 5 of 15

2. RELATED DOCUMENTATION

This section identifies the documents that are related to the contents of this document as indicated in the following paragraphs.

2.1.   Parent Documents
The parent documents establish the criteria and technical basis for the existence of this document.

2.1.1. DADS Documents
- DADS Program Management Plan (PMP) for Fiscal Year 2003
  I:\$ALL DADS\00 Procedures\PMP\FY03

2.1.2. AFF Documents
- AFF Software Development Plan (SDP)
  I:\$AFF\$AFF Generic\00 Stds & Procedure\SDP\FY03

2.2.   Applicable Documents
Applicable documents are those documents whose content is considered to form a part of this document. The specified parts of the applicable documents carry the same weight as if they were stated within the body of this document.

2.2.1. Metadata Documents
- Spec processor guide
  I:\$AFF\AFF Data Deployments\$AFF Data Deploy Generic\08 Deliverables and Work Products\MetaSpecs\AFF2000 Virtual Table Specifications Guide.20020418.doc
- Spec processor generates metadata based on specification existing in the meta2000 and meta3000 format series, as specified in the following:
  I:\$AFF\AFF Data Deployments\$AFF Data Deploy Generic\08 Deliverables and Work Products\MetaSpecs\AFF2000 Metadata ASCII Import File Specifications.20030110.pdf
- DataWarehouse GeoSpecs
  I:\$AFF\AFF Data Deployments\$AFF Data Deploy Generic\08 Deliverables and Work Products\GeoSpecs
- DataWarehouse Metadata Specs
  I:\$AFF\AFF Data Deployments\$AFF Data Deploy Generic\08 Deliverables and Work Products\MetaSpecs
- DataWarehouse Processing Instructions
  I:\$AFF\AFF Data Deployments\$AFF Data Deploy Generic\08 Deliverables and Work Products\Processing Instructions
- GeoSelect Document which serves as an appendix to the GeoSelection Functional Spec
  I:\$AFF\TeamSharedPad\GeoFocus\Design Details\AFF 2\GeoSelectDetails.doc
- MapDetails document that serves as an appendix to the Reference Map Functional Spec
  I:\$AFF\TeamSharedPad\GeoFocus\Design Details\AFF 2\MapDetails.doc
- GeoNamesRules Document
  I:\$AFF\TeamSharedPad\GeoFocus\Design Details\AFF 2\GeoNamesRules.doc

2.2.2. Printed Report Documentation
- Overview of the Printed Report Process
  I:\$AFF\AFF Printed Reports\$Printed Rpts Generic\00 Stds &Proc\System Design\Printed Reports Generation 20030509.pdf
- Overall system design documents
  I:\$AFF\AFF Printed Reports\$Printed Rpts Generic\00 Stds &Proc\System Design\ XML through AFF20020124.ppt
- Operational instructions documents

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Date printed: 1/20/2006

Page 6 of 15

I:\$AFF\AFF Printed Reports\$Printed Rpts Generic\00 Stds &Proc\Operational Procedures
- Printed Report Deployment Plan Template
I:\$AFF\AFF Printed Reports\$Printed Rpts Generic\00 Stds &Proc/PHC Deployment Plan.doc

2.2.3. DADS Documents
- IBM DADS - FY03 Key Milestones Baseline

  I:\$ALL DADS\04 Meetings\Weekly BOC Exec Status Mtgs
- Master Program Plan
  I:\$ALL DADS\03 WorkPlans\MPP\FY03

2.3.   Reference Documents
Reference documents are those documents that, although not a part of this document, serve to amplify or clarify its contents, or dictate work policy or procedures.

2.3.1. DADS Documents
- DADSO Strategies for FY03
  I:\$ALL DADS\11 Spon Input\DADSO Strategies 20020812

- DADS Program Proposal by IBM for Fiscal Year 2003, Reference # 50-YABC-7-66012, Fiscal Year 2003
  I:\$IBM CO\09 Spon Agrmt\Proposal\FY03\ FY03 FINAL Tech Prop Only_ 20020911-resubmission.doc

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Date printed: 1/20/2006

Page 7 of 15

3. PRINTED REPORT DEPLOYMENT PROCESS

3.1. Printed Report Deployments

Printed Report Deployments are driven by Fiscal Year requirements as outlined in the Master Activity Schedule (MAS) or Project Change Requests (PCRs) that occur during the Fiscal Year. The BOC provides a service to their customers, by generating pdf files via AFF for use in creating hard copy printed reports. As part of this service, the pdf to be deployed is made available to the supplier for review.

The current planned list of printed report deployments and the schedule date for each is maintained in the FY03 Key Milestones Baseline Document. *See section 2.2 of this document for the pointer to the file*.

The major milestones for the AFF printed report deployment process include:
- Date of box head availability for review
- Date of test state pdf availability for review if applicable
- Date of all state pdfs availability for review if applicable
- Date of pdf availability for review if not state based
- Date of nation pdf availability for review if applicable

The deliverables associated with each printed report deployment are:
- Actual pdf release
- Printed Report Deployment Plan

3.2. Printed Report Presentation

A presentation on the overall printed report process is located at:

I:\$AFF\AFF Printed Reports\$Printed Rpts Generic\00 Stds &Proc\System Design\Printed Reports Generation 20030509.pdf

3.3. Printed Report Deployment Team
The printed report deployment team has BOC and IBM representatives from many functional teams who operate as a cohesive unit. The functional areas include:
1. AFF Development and Deployment
2. Business and Technical Architecture
3. Data Warehouse
4. BOC Printed Report Deployment

3.4. Printed Report Deployment Requirements Process

The Printed Report Deployment Requirements Determination Phase begins with meetings to ascertain what the supplier desires and the types of report they produce.

Several requirement and specification files contribute to the complete definition of any Printed Report product. Some of the files are optional.

1. The work is generally initiated by a PCR document, which provides a broad description of the requested product and scopes the work in terms of number of tables, geo coverage, type of reports, and any special requirements deemed relevant. A prerequisite for the production of the Printed Report is for the data to be loaded in American FactFinder's data warehouse database.

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Date printed: 1/20/2006

Page 8 of 15

Therefore, any PCR requesting a new Printed Report has to address the data availability issue first.

2. The Printed Report system is a combination of American FactFinder and Fenestra's AutoFormatter tool. Between the two components, a large set of rules for formatting, grouping of geographies by type of section – hierarchical or inventory, pagination, balancing of table columns, empty page skipping, etc. is implemented. This set of rules currently embedded in the system has been fully specified in the following document:

    I:\$AFF\AFF Printed Reports\Phc-1\11 Requirements & Specs - PHC\Final Specs 20020903\ specs-gen-att4-R3-DRAFT.wpd

    The understanding with the client is that any Printed Report for which the formatting rules deviate from the provisions of this document should have the changes fully specified in a distinct document.

3. Set of functional specs describing the generation of any new geographic stubs. For example, for PHC-1, these stub specs are provided in:

    I:\$AFF\AFF Printed Reports\Phc-1\11 Requirements & Specs - PHC\Final Specs 20020903

4. Set of functional specs describing the table definition. Two types of table specs are necessary:
    - Table layout specs, describing the structure of the box heads.
    - Table sourcing specs, describing the formulae needed to obtain the values from the data warehouse by iterating through all the geographies in the stubs.

5. In addition to the requirement documents listed above, the DADS staff (BOC and IBM) generate a derived requirement document that summarizes all the possible combinations of box head and geo stubs, and provides a clear view of the geographic coverage of all the tables in the Printed Report product. This document describes how the skipped documents should be dealt with, as either references on container pages or completely skipped from the report. Also, this document represents the requirement for a driver file that governs the sequence of tables in the report and the pagination.

The specification document is used to generate a global feature in Rational Clear Quest. This global feature is used as a vehicle to accumulate information via pointers to specifications that provide the detail necessary to accomplish the printed report deployment and any associated code modifications and metadata generation. Additional relevant documents are also referenced in the feature. Documents relevant to the printed report deployment should be accumulated in the following location:

I:\$AFF\AFF Printed Reports\Phc-<n>\11 Requirements & Specs – PHC

where <n> needs to be substituted with the PHC product number (up to PHC-5 presently).

Due to the number of printed report deployments and the iterative nature of the specification deliveries based on need rather than a fixed schedule, there should be a relative priority to determine the sequence to address requests when there is contention. To facilitate this determination of work sequence, the BOC maintains a list of Relative AFF Priorities. This document is located at:

I:\$AFF\$AFF Generic\02 Milestones\BOC Priorities\BOC_AFF_deploy_priorities.doc

Any AFF code modifications required to support the printed report deployment are hosted on the AFF development environment and are identified and tracked using the Clear Case Feature process. Defects are identified and tracked using the Clear Case Defect process.

3.5.   Printed Report Deployment Iterative Approach

The Printer Report Deployment Process uses an iterative approach. The requirements documents, as specified in section 3.4, are received and analyzed. If code changes are necessary to both or any of the AFF and Fenestra systems, the activities are sized and planed accordingly. Two parallel activities occur for specifying the tables:

1. Based on the table layout and sourcing specification, the tables are spec-ed using the Spec Processor tool.   The table metadata and SQL view are loaded in the Deployment system, and the tables undergo a process of approval from the customer.

2. Table layout specs are sent to the Fenestra staff, who prepares table property files that capture the table layout as compliant with Fenestra's tool AutoFormatter. Table box heads are sent for verification to data provider as well.

    Note. There is an open CR to automate this process and be able to generate table layout property files based on the work in 1). This eliminates the need for extra work and verification in table layout production.

If the Printed Report requires dedicated or new geographic stubs, they are specified, metadata files generated and loaded in the Metadata Repository. The geographic stubs are verified separately by the provider. In essence, the geographic stubs contain two types of geo sequences, hierarchical and inventory portions, with specific formatting requirements. The abstracted rules for generating the stubs are exported to a flat, comma delimited file and made available to Fenestra, to assist them in the generation of a section of the property file.

As a result of this preparation work, the following types of driver files can be generated:

1. Data XML files. These files are generated based on an AFF tool (web page) that allows the user to make the necessary dataset, geo and table selections, and controls the generation and bundling of the data files in a zip file.
2. Property file, containing a description of the table layout: column width and vertical lines, box head structure and text, and a specification of the "bands", which provides details for row formatting.
3. A catalog file to support Internationalization and avoid hard coding of various textual labels.
4. A driver file to give the sequence of tables in the report.

After the Printed Report is generated, the Deployment DADS staff (BOC and IBM) performs the unit testing of the report, which consists of a visual inspection without content verification. Upon successful unit testing, the report is copied on the Intranet and submitted for a formal inspection to the BOC liaison with the data provider. Upon successful verification, the BOC liaison with the data provider gives the approval to embed the fonts in the PDF file and copy the report to the internal review site. At this stage, the Printed Report may undergo several corrections, driven by specific requests for corrections initiated by the customer. The depth and complexity of the requested corrections may vary.

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Date printed: 1/20/2006

Page 10 of 15

4. PRINTED REPORT DEPLOYMENT ACTIVITIES MANAGEMENT

4.1. Printed Report Deployment Dependencies

4.1.1. Deliveries from the Supplier
Supplier delivery dependencies to AFF are needed to support the Printed Report Deployments. Specific requirements are identified in each printed report deployment plan. The number and the timing of initial and iterative deliveries received from the supplier is a key driver of the duration of the Printed Report deployment process.

4.1.2. Supplier Review Duration
The length of elapsed time required to conduct the supplier review is a key driver of the overall Printed Report deployment process duration.

4.1.3. Supplier Approval
Written approval from the supplier is required to complete the process.

4.2. Planning and Tracking Vehicles

4.2.1. Printed Report Deployment Plan
A Printed Report Deployment plan is created for each Printed Report deployment. It documents the unique aspects of each Printed Report being deployed and points to the filled checklist, schedule, test reports and other relevant documentation. Lessons Learned are also captured as part of the plan located in:

I:\$AFF\AFF Printed Reports\$Printed Rpts Generic\00 Stds &Proc

4.2.2. Microsoft Project Schedule
An MSProject task plan is generated for each Printed Report deployment starting with PHC-5. This document will be located at:

I:\$AFF\AFF Printed Reports\$Printed Rpts Generic\00 Stds &Proc

4.3. Printed Report Deployment Assumptions and Constraints

The following are the assumptions and constraints that apply to each Printed Report deployment. Additional assumptions and constraints may apply to a particular deployment.

1) A prerequisite of the report is for the data to be loaded in AFF's Data Warehouse database.
2) All the currently support Printed Reports model the AFF's Geographic Comparison Tables
3) No changes of formatting are assumed from one report to another, unless clearly specified in the requirements for any given Printed Report. The rules for formatting currently enforced are those specified for PHC-1.
4) Three types of Printed Reports are supported: Format A (one-page report), Format B (two-page report), and Format C (half-page report, with table columns wrapping in two columns per page). Format C columns are balanced, according to the rules specified for PHC-1.
5) All Printed Reports start at page 1, unless otherwise specified. Although the Printed Report may be bundled with additional PDF documents, this is outside the scope of the regular Printed Report work as performed by the AFF team.
6) The official deployment site is an Internal, which hosts the internally published PDF files, and provides access to an web application that enables the data provider to review the tables on line. This same application is used by the deployment staff to run the operational phases of the Printed Reports generation.

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Date printed: 1/20/2006

Page 11 of 15

4.4. Printed Report Deployment Acceptance and Completion Criteria

The supplier is the final acceptance point for the Printed Report deployment. Written supplier approval is required.

When the Printed Report is published by POP division on the below site (visible to the public), the deployment is considered officially complete.

http://www.census.gov/prod/cen2000/

4.5. Printed Report Deployment Risks

Risks related to each printed report deployment are captured in the specific printed report deployment plan.

4.6. Printed Report Deployment Quality

4.6.1. Quality Assurance Summery
The following activities contribute to defect removal and promote the overall quality of the Printed Report deployment:
1. DADS Staff Review
2. Supplier Review

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Date printed: 1/20/2006

Page 12 of 15

APPENDIX A - PRINTED REPORT DEPLOYMENT PLAN TEMPLATE

The Printed Report Deployment Plan Template is located in the separate file in:

I:\$AFF\AFF Printed Reports\$Printed Rpts Generic\00 Stds &Proc/Draft PHC Deployment Plan.doc

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Date printed: 1/20/2006

Page 13

APPENDIX B - GLOSSARY OF TERMS AND ACRONYMS

ACS	American Community Survey
AFF	American FactFinder
AS	American Samoa
BOC	Bureau of the Census
CCB	Change Control Board
CD	Congressional Districts
CNM	Commonwealth of the Northern Marianas
CWS	Congressional Web Site
DADS	Data Access and Dissemination System
DB	Data Base
DBMS	Data Base Management System
DDPP	Data Deployment Plan by Product
DEV	Development Environment
DPP	Data Product Production
DSS	Decennial Supplementary Survey
DT	Detailed Table
DW	Data Warehouse
ECON	Economic Planning and Coordination Division, when used to refer to a division in the Bureau Economic Censuses and Surveys, when used to refer to a program
EP	External Production
FN	Final National
FY	Fiscal Year
GCT	Geographic Comparison Table
GEO	Geography Division
GU	Guam
IA	Island Area
IBM	International Business Machines Corporation
IR	Internal Review
LDDP	Load and Deploy Data Products
MAS	Master Activity Schedule
MD	Metadata
MDR	Metadata Repository
MPP	Master Program Plan

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Date printed: 1/20/2006

Page 14 of 15

N/A	Not Applicable
PA	Product Assurance
PCR	Project Change Request
PEP	Population Estimates and Projections
PHC	Population Housing Characteristics
PMP	Program Management Plan
POP	Population (Population Division of the Census)
QT	Quick table
SDP	Software Development Plan
SF	Summary File
SQL	Structured Query Language
TBD	To Be Determined
UAT	User Acceptance Test
UI	User Interface
USCB	U.S. Census Bureau (aka: Bureau of Census)
VI	Virgin Islands
WBS	Work Breakdown Structure